

PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q67795

Kiyoo MORITA

Appln. No.: 10/020,956

Group Art Unit: 3654

Confirmation No.: 1153

Examiner: Sang K. Kim

Filed: December 19, 2001

For: TAPE REEL

REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.41, Appellant respectfully submits this Reply Brief in response to the Examiner's Answer dated March 31, 2005. Entry of this Reply Brief is respectfully requested.

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STATUS OF CLAIMS

Claims 1-3 are all the claims presently pending in the application. Claims 1-3 stand finally rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,807,826 (Iwahashi).

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GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent
No. 4,807,826 (Iwahashi).

ARGUMENT

In the Examiner's Answer of March 31, 2005 in the above application, in maintaining and arguing in support of the rejection of claims 1-3 under 35 U.S.C. § 102(b), the Examiner asserts the following (see Examiner's Answer, page 5, second paragraph):

The invention of Iwahashi '826 is designed to prevent the inward radial deformation, but the prior art teaches Appellant's claimed invention by its recognition of the deformation and an attempt to prevent it. The reference as a whole teaches the concept of means for gradually decreasing a distance between the flanges and the hub as the magnetic tape is wrapped around the hub. Iwahashi '826 recognizes the problem with an inward radial bending to the hub caused by the tape tightly wrapped around the hub. As the hub deforms radially, both of the flanges deflect inwardly to the hub. Iwahashi '826 attempts to solve the problem by shortening the length of the rib which prevents the outer cylindrical section from an inward radial deformation when the tape is tightly wound around the outer cylindrical section, see column 2, lines 1-17.

In so doing, the Examiner has presented new points of argument in respect of Iwahashi '826, or at least has presented a new interpretation/application of the reference in support of this rejection.

More specifically, the Examiner alleges that Iwahashi '826 teaches Appellant's invention by the fact that the reference recognizes the prior art problem of inward radial deformation and attempts to prevent it. The Examiner also references the discussion in Iwahashi '826 (in column 2, lines 1-17) of an attempt to solve the problem by shortening the length of the rib which allegedly prevents the outer cylindrical section from an inward radial deformation when tape is tightly wound around the outer cylindrical section.

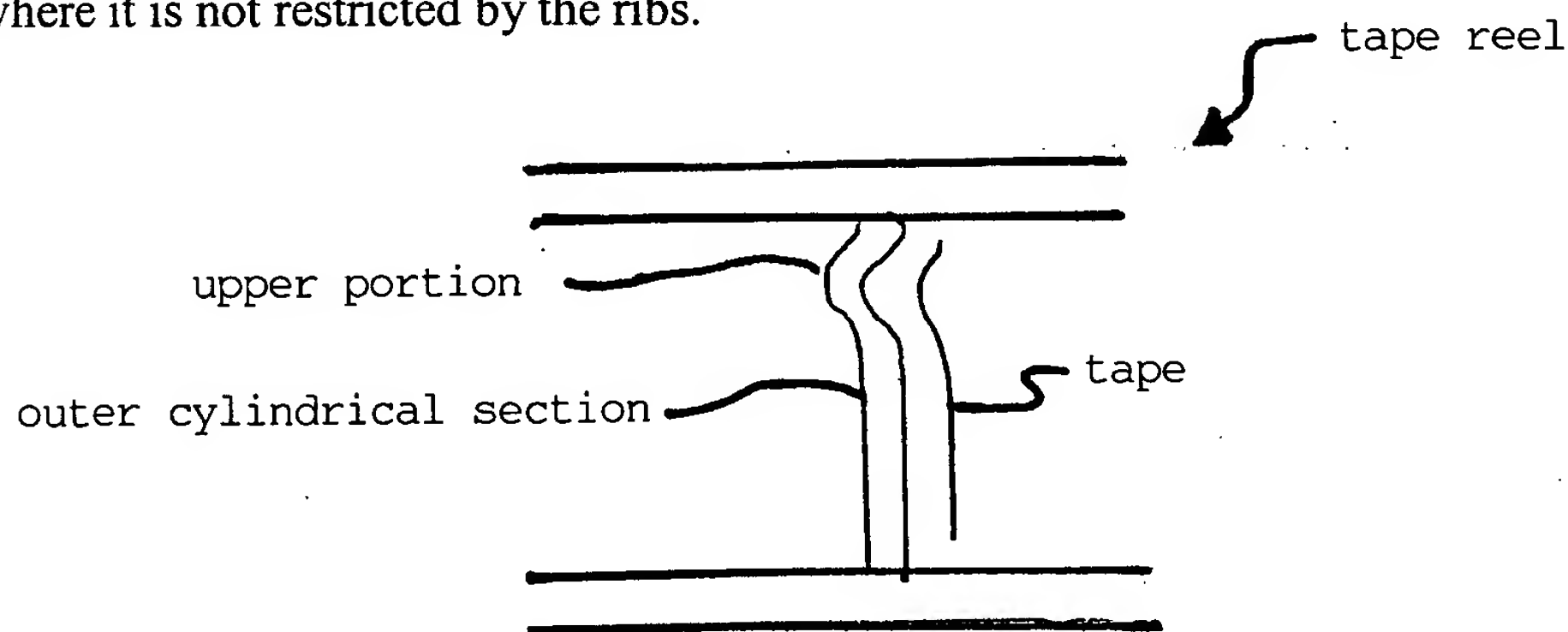
However, for the following reasons, Iwahashi '826 never teaches, suggests or even hints at the flanges of the tape reel deflecting inwardly towards each other, but rather is referring to solving the problem of formation of waving unevenness on the outer periphery of the outer cylindrical section of the tape reel, i.e., the portion on which the tape is wound.

Referring to the Background of the Invention portion of Iwahashi '826, he discusses problems encountered when forming tape reels of a synthetic resin by injection molding, in which molten resin is injected into molding dies. Apparently, during the injecting molding process of the tape reel, two molten resin flows are formed. The first resin flow flows radially through the portion of the die to form the lower reel flange, and the second resin flow is formed to flow through the upper end wall of the portion for forming the upper end wall of the inner cylindrical section and through the upper end portion of the rib. During this injection molding process, due to the opposite flow directions of the molten resin in the first and second flow confluencing at an axial intermediate portion, stress is created in the resin. The stress causes formation of a waving unevenness at the confluencing portion. When waving of the outer periphery of the outer cylindrical section is caused, wrinkles tend to be formed on the tape when it is wound around the outer cylindrical section of the tape reel which in turn causes disturbance in the signal or data to be recorded on the tape (see column 1, lines 31-64 of Iwahashi '826).

In the paragraph bridging columns 1 and 2, Iwahashi '826 points out that one way of dealing with the formation of waving unevenness on the outer periphery of the outer cylindrical section is by shortening a length of the rib so as to interrupt the second flow by discontinuous flow between the inner and outer cylindrical sections at the upper end thereof. He further points

out that this solution, however, causes another problem in that resilient deformation is caused at the discontinued portion of the outer cylindrical section toward the inner cylindrical section when the tape is tightly wound therearound. In other words, he points out that by shortening the ribs, the *upper end portion* of the outer cylindrical section becomes free from inward or radial bending (emphasis added). He further discloses that this causes radially inward bending of the portion where it is not restricted by the ribs, and that as a result of the radially inward bending at the upper portion of the outer cylindrical section, the tape wound therearound may constantly be subjected to uneven force in a direction of the width thereof, which in turn causes wrinkles thereby affecting the signal or data to be recorded on the tape.

From the foregoing discussion and the Background portion of Iwahashi '826, it is quite clear that Iwahashi discusses one problematic solution to preventing the formation of waving unevenness on the outer periphery of the outer cylindrical section of a tape reel. As can be seen in the schematic diagram below, although shortening the ribs allows the outer peripheral section of the tape reel to be free of waving prior to winding of the tape thereon, once the tape is wound thereon radially inward bending occurs at the *upper portion* of the outer cylindrical section where it is not restricted by the ribs.



Thus, the radially inward bending or deformation is at an upper portion of the outer cylindrical section of the tape reel. Quite clearly, nothing is ever mentioned about the upper and lower flanges of the tape reel deflecting towards each other over an entire circumference thereof let alone “means for gradually decreasing a distance between said upper flange and said lower flange outside the outer peripheral surface of the hub, as said magnetic tape is being wrapped around said hub, by deflecting said upper and lower flanges towards each other over an entire circumference thereof” as recited in Appellant’s independent claim 1. Thus, the Examiner’s assertion that as the hub deforms radially (in Iwahashi ‘826), both of the flanges deflect inwardly to the hub is sheer speculation and finds no support in the portion cited by the Examiner (i.e., column 2, lines 1-17), nor any other part of the reference.

Still further, Appellant respectfully submits that there is clearly no support for the Examiner’s position that the radially inward bending at the upper portion of the outer cylindrical section of Iwahashi ‘826 would inherently cause both flanges of the tape reel to deflect inwardly. In contradistinction, Appellant provides a discussion on pages 13-15 of the Appeal Brief submitted on January 10, 2005 describing in detail how the present invention actively applies the deformation of the tape reel hub which results from winding the tape around the hub, and optimizes the distance between the upper flange and the lower flange while winding the tape. Specifically, when the outer peripheral wall 11a is pressed in the center direction by the winding force of the tape, the outer peripheral wall 11a deforms in the center direction (as shown by the broken lines in the sketch on page 14 of the Appeal Brief) and thereby obtains the desired

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decrease in distance between the upper flange and lower flange outside the outer peripheral surface of the hub.

In summary, it is quite clear that even the teachings in the “Background” portion of Iwahashi ‘826 fail to teach or even remotely suggest Appellant’s invention as set forth in claims 1-3 on Appeal.

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CONCLUSION

For the above reasons as well as the reasons set forth in Appeal Brief filed on January 10, 2005, Appellant respectfully requests that the Board reverse the Examiner's rejection of all claims on Appeal. An early and favorable decision on the merits of this Appeal is respectfully requested.

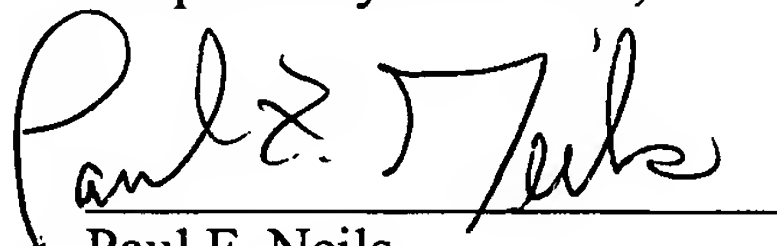
SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul F. Neils", written over a horizontal line.

Paul F. Neils

Registration No. 33,102

Date: May 25, 2005

Attorney Docket No.: Q67795